



THOMAS G. NEWMAN,  
EDITOR.

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## EDITORIAL BUZZINGS.

**This Week** we present our readers with a choice Song, set to music by Mr. A. W. Wilson, entitled, "Maggie, the Cows are in the Clover." Music will enliven any household, and this song is easy for the performer on the organ or piano, and has a sweet air. Bee-keepers can change the chorus to read thus, if desired:

The bees are swarming over,  
They've tried it now since morn;  
Go and hive them, Maggie, out behind the barn.

**Hon. Edwin Willits**, President of the Michigan Agricultural College, and the honored friend of apiculture, has recently been appointed First Assistant Secretary of Agriculture, by President Harrison.

**Mr. Wm. H. Shane**, one of the most successful honey producers of Medina County, O., died on the 7th inst. He was not only a good bee-keeper, but also a good Christian.

**Ivar S. Young**, of Christiania, Norway, writes us that he intended no wrong in the articles he wrote for his paper about his visit to America a year ago, but he fails to explain many things he said derogatory to Americans. We must accept his assertions, however, even though we can see no consistency in them.

**In Minnesota** this is the latest report of the weather. It is from C. G. Ridout, of Hutchinson, Minn., and dated March 21, 1889. He says:

The weather is fine, 60° above zero, and the sun shining, but no snow, and very little ice. It is the earliest spring known for many years.

**That Picture.**—Dr. A. B. Mason, of Auburndale, O., writes thus concerning the engraving on page 150, showing the face of our esteemed friend, Mr. Eugene Secor:

It looks just exactly like him (only a little better), and if any one should tell me that it was not a good likeness, I should take a second look at him to see if he was not demented.

He then remarks thus about the present condition of his bees which were wintered in the cellar:

We had some warm days last week, so bees could fly, but ours are still in the cellar and in good condition. On Thursday I put out the colony that was the lightest in stores when put in winter quarters last fall, and it had brood in all stages, and stores enough to last till May. I also put out one to which I introduced an imported queen on Nov. 17, and found it in good condition, with plenty of honey, a goodly number of young bees, and brood in all stages.

**The Minnesota State Bee-Association** was organized at Minneapolis last January, and the officers elected for the first year were: President, L. H. Wilcox, of Hastings; Vice-President, Wm. Danforth, Red Wing; Secretary, Wm. Urie, Minneapolis; Treasurer, J. Bass, St. Paul. Executive Committee, B. Taylor, Wm. Dwire, and J. Bass. The Secretary writes:

This association is organized for the purpose of bringing all the bee-keepers and others who are interested in apiculture together, for their mutual instruction and improvement regarding methods of managing bees, and other things that may be to their advantage, and to those about to engage in the business. The first meeting will be held at the Experimental Farm the same day the Horticulture Society meets, of which due notice will be given.

**Fight Between Insects.**—An exchange gives this interesting bit of insect news:

A traveler in South Africa reports seeing a caterpillar crawling at a rapid pace, followed by hundreds of ants. Being quicker in their movements the ants would catch up with the caterpillar, and one would mount his back and bite him. The caterpillar would turn his head and bite the ant and kill his tormenter. After slaughtering a dozen or more of his persecutors the caterpillar showed signs of fatigue. Betaking himself to a stalk of grass the caterpillar climbed up tall first, followed by the ants. As one approached he seized it in his jaws and threw it off the stalk. The ants, seeing that the caterpillar had too strong a position for them, resorted to strategy. They began sawing through the grass stalk. In a few moments the stalk fell, and hundreds of ants pounced upon the caterpillar. He was killed at once.

**Prof. Cook**, in a private letter, just received, says:

Bees here seem to have wintered very nicely, though I had to warm the cellar repeatedly by the use of a kerosene stove.

The general opinion is that bees have wintered well, though some of those in cellars are reported as having the diarrhea slightly. They will soon get over that after having a good chance to fly.

### Detecting Adulterated Honey.

—Mr. E. G. Haven, Belleville, Kans., on March 16, 1889, asks this question:

Can you inform us through the AMERICAN BEE JOURNAL how to detect adulterated from pure extracted honey?

That is sometimes rather difficult, but here is a method which will generally prove successful. It is from a Canadian writer in the *Dominion Grocer*. He says:

Genuine honey can be readily distinguished from "manufactured honey" by a microscope. The former has few or no sugar crystals, and abounds with pollen grains, while the imitations have little else than these crystals, with rarely a trace of pollen grains. The honeyed taste of the manufactured article may come from honey comb or beeswax being mashed up with the article used in the manufacture. Each class of plants has its own specific form of pollen grain, and any one conversant with this branch of botany could tell from what part of the world the honey came, by studying the pollen grains that it might contain.

**Hiving Bees on Sunday** is commented upon by one of our correspondents in a private letter, and as the subject was brought up on page 182 of our last issue, it may be interesting to read the following opinion from a legal as well as apian stand-point:

The Sunday law in all States where civilization pure and unadulterated rules, allows of work of necessity and charity being done on the Sabbath. Hiving bees must be considered a work of necessity, consequently legal.

Unless a party obtains consent he has no right to go on to another's land to take bees away. It would be a trespass so to do, but if no injury was done, the damage recovered in a suit at law would be nominal only, say one cent or one dollar.

**Catalogues for 1889** are on our desk from—

Dr. G. L. Tinker, New Philadelphia, O.—20 pages—Bees, Queens, and Apian Supplies.

G. D. Howe, North Hadley, Mass.—78 pages—Potato Manual.

James A. Nelson, Muncie, Kansas—12 pages—Queens, Comb Foundation, etc.

Dr. A. B. Mason, Auburndale, O.—4 pages—Egg Preservative.

S. L. Watkins, Placerville, Calif.—1 page—Bees and Honey.

Oliver Foster, Mt. Vernon, Iowa—16 pages—Bees, Queens, Honey and Supplies.

Thomas S. Wallace, Clayton, Ills.—4 pages—Bees and Queens.

**An Admirable** historical and anecdotal article, with illustrations, on Washington's Inauguration, leads off the April number of *Frank Leslie's Popular Monthly*. It cannot fail to be in general demand at this centennial period, when President Harrison is preparing to join the commemorative celebration by travelling to New York over the same route taken by our first President one hundred years ago. Another seasonable article is Ensign Wilkinson's account of "Samoa, and the Troubles There." The serial and short stories, literary essays, poems, biographical and natural history sketches, humorous verse and, above all, the art illustrations are profuse and varied, more than sustaining the great reputation of the *Popular Monthly*.

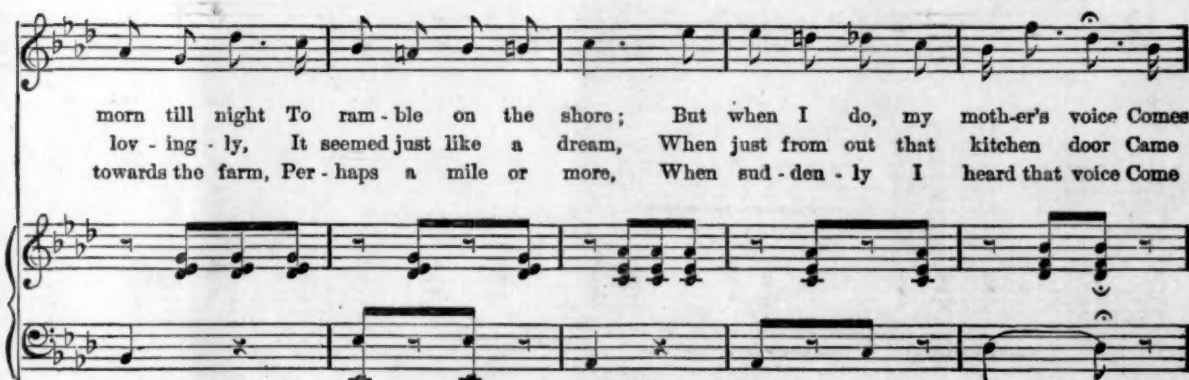
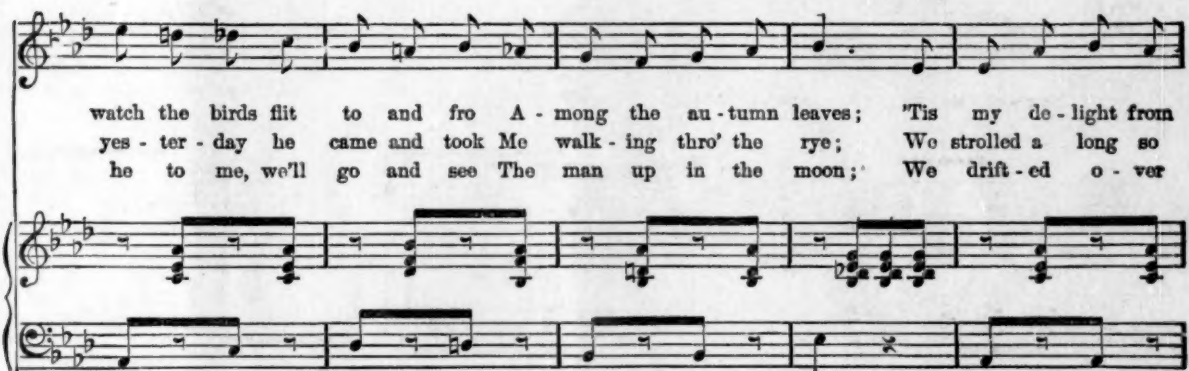
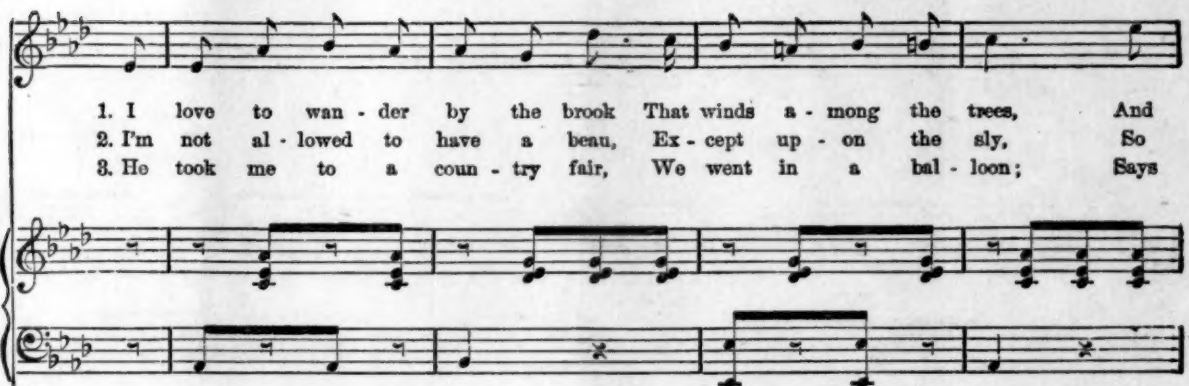
# MAGGIE, THE COWS ARE IN THE CLOVER.

## SONG.

*A Copyrighted Song, by especial Permission of T. B. Harms & Co., 819 Broadway, N. Y.*

Written and Composed by AL. W. WILSON.

ALLEGRETTO.





from the kitch - en door,— Mag - gie! Mag - gie!  
that fa - mil - iar scream,— Mag - gie! Mag - gie!  
from the kitch - en door,— Mag - gie! Mag - gie!

**CHORUS.**

The cows are in the clo - ver, They've tram-pled it since morn, Go, and drive them,

Mag-gie, to the old red barn. The cows are in the clo-ver, They've trampled it since

The musical score consists of three staves. The top staff is a vocal line in G major (one sharp) and 2/4 time, with lyrics underneath. The middle and bottom staves are piano accompaniment. The middle staff features a crescendo leading to a forte (f) dynamic. The bottom staff continues the piano accompaniment with chords and single notes.

morn;                      Go, and drive them, Mag-gie, to the old red barn.....

## QUERIES & REPLIES.

### Share to be Given when Keeping Bees for Others.

Written for the American Bee Journal

**Query 621.**—Suppose that in the spring I take on shares 40 colonies of bees in box-hives, and am told to do with them as I please; but I am to give the owner a share of the increase of bees, in 8-frame Langstroth hives, in the fall, with a slatted honey-board and one Heddon surplus-case on each hive. What share should I give him? Remember that I get nothing but the bees in the spring, and he gets no honey.—IOWA.

Your trade is too obscure; I cannot say.—J. M. HAMBAUGH.

If you are to get all the honey, you should give at least half of the increase.—J. P. H. BROWN.

I should say that if you give him 50 colonies, you would do very generously.—A. J. COOK.

Make the best bargain you can, and stick to it.—MRS. L. HARRISON.

Make the best arrangements together, so as to satisfy both.—P. L. VIALLO.

If you get all the bees in the spring, and all the honey, you should be willing to give him all the increase, if you are allowed to manage the bees, and do it reasonably well.—R. L. TAYLOR.

About one-third. I should not advise you to enter into any such arrangement.—WILL M. BARNUM.

You had better let them alone, unless you can buy them outright.—H. D. CUTTING.

There are so many circumstances which would widely alter just conditions, that I would not try to answer.—JAMES HEDDON.

No mortal can tell. During the past two seasons, 1887 and 1888, it would have been working "for the fun of it," and paying pretty roundly for the privilege, in most localities. No "Hawkeye" should get caught in such a "take."—A. B. MASON.

All depends on the season. If as good as it was here in 1877, you could afford to give him 40 colonies. If as poor as it was in most parts of the United States last year, it would pay you well to let them entirely alone.—G. M. DOOLITTLE.

If the 40 old colonies are to remain the property of the original owner, and only the increase is to be divided, then I should not give him over one-third—that is, you to furnish all the supplies and do all the work.—C. H. DIBBERN.

Find the value of the bees in the box-hives, and the value of bees in the new hives, and give him bees enough in the latter to pay the value of the bees in the former.—M. MAHIN.

I do not know. Whatever the arrangement agreed upon may be, it should be free from conditions, anything vague, liable to be misunderstood, or liable to be understood more ways than one. It should be reduced to a writing in duplicate, that each party may have a copy.—J. M. SHUCK.

If I understand the question, you want to know how many colonies of bees in Langstroth hives in the fall you shall pay for 40 colonies in box-hives in the spring. Figure the actual value of each, and act accordingly. If the risk of wintering is much, you might give him 40 colonies.—C. C. MILLER.

When bees were more valuable than they are now, some years ago, I thought it a good thing on my part to take them one-half for the other. But now I think it would depend upon the locality, and what one was able to do with the bees.—G. W. DEMAREE.

If you return the old hives in the fall, and 20 in the new hives, I should think that both might do well—if the season is propitious, and you know how to manage them. But if you did not have that many swarms, and no honey, it would be a losing game for you. I believe, however, that both of you will feel better in the fall if a definite number is agreed upon.—EUGENE SECOR.

I do not know. If the case were mine, and here, I should make a contract that I thought would pay, but to take bees in box-hives to care for and pay back in filled Langstroth hives, I should feel as though I had a hard job before me. It will depend, too, upon the season and yield. The better way, I think, would be to arrange the trade upon a basis such that you will give him a certain amount in value in Langstroth hives, the proportion to depend upon the success of the undertaking.—J. E. POND.

There are too many contingencies to be able to tell what would be exact justice to both parties. Taking into account the uncertainties of the season, if you give the owner a good share of the increase, while you take the honey, it would be as fair an arrangement as you can now make.—THE EDITOR.

There will be a meeting of the Susquehanna County Bee-Keepers' Association at the Court House in Montrose, Pa., on Saturday, May 4, 1889, at 10 a. m. H. M. SEELEY, Sec.

The Des Moines County, Iowa, Bee-Keepers' Association will hold its annual convention in the Court House at Burlington, on April 23, 1889, at 10 a. m. All bee-keepers are invited. JOHN NAU, Sec.

The 11th annual session of the Texas State Bee-Keepers' Association will be held in the apiary of W. R. Graham, of Greenville, Hunt Co., Tex., on May 1 and 2, 1889. All bee-keepers are invited. The last meeting was held here last May, and was the best ever held. So we look forward to a good time next May. A cordial welcome and hospitality will be tendered to all who come. G. A. WILSON, Sec.

## CORRESPONDENCE.

### PARTHENOGENESIS.

#### Some Remarks on Mr. Latham's Article on Evolution.

Written for the American Bee Journal

BY DR. C. C. MILLER.

On page 168, Mr. J. F. Latham gives some instruction about queen-bees. I am not scholar enough to understand the whole of what he says—in fact there is a good deal of it that I do not understand at all, and I wish that some one who does, would, for the benefit of us common bee-keepers, give us the gist of it in plain English.

What are the points in it that we are to know to enable us to rear better queens? If I get the right bearing of the writer, I am to understand from "the atrophied glands of the queen-bee, that parthenogenesis was, at one period in the existence of her species, a more substantial reality than at its present stage of development." Now are we to understand that Dzierzon is all wrong, and that parthenogenesis "at its present stage of development" is not a very "substantial reality"? Is it not a very "substantial reality" that a virgin queen may lay eggs that hatch?

Another part of the article I think I can understand, but possibly I do not get at the author's real meaning. He speaks of the first and second chapters of Genesis, and then says: "As this narrative of the creation (purported to have been drawn from Acadian and Turanian sources, more than a thousand years prior to the compilation of the books of Genesis, as evinced in resurrected Assyrian literature) is," etc. Now I have read the Bible a good deal—I have read every word of it from beginning to end, and I have no recollection of a single passage in it where it "purported to have been drawn from Acadian and Turanian sources." On the contrary, there are passages in it that show very plainly that it purports to be a direct revelation from God himself. Thus, in II Timothy, 3, 16: "All Scripture is given by inspiration of God." That there are men who do not believe in the Bible as a Divine revelation, I have long known, but this is the first time I have ever known that any one believed or taught that the Bible itself "purported to have been drawn from Acadian and Turanian sources."

If I might be allowed, I should like to ask, if the narrative was "drawn from Acadian and Turanian sources more than a thousand years prior to



the compilation of the book of Genesis," what was done with it during those thousand years after it was "drawn," and before it was used?

Now, mind you, in what I have said, I do not pretend to discuss the question as to whether the Bible is genuine—I have only talked about what it "purports" to be. If Mr. Latham has some other than the common meaning for the word "purported," and simply means to say that there is something not entirely genuine about the Bible as the revealed will of God, then I have a word to say.

I do not consider the pages of the AMERICAN BEE JOURNAL the proper place for religious discussions. We meet here as bee-keepers to discuss matters relating to bee-keeping. Among my friends are some whom I highly esteem, who do not believe as I do in the Bible. Mr. Latham has the right to disagree with me, but surely he must know that in the ranks of bee-keepers there are not a few who reverently study the Bible as in very truth God's word, and when he goes out of his way to lug into a parenthesis a fling at that which we hold so sacred, I feel pretty sure that a careful reconsideration of the matter will make him feel that it would have been better to have treated with a little more courtesy that large number who, although in his opinion they are mistaken in their belief, are at least sincere therein.

Marengo, Ills.

[In-so-far as the matter referred to has a bearing upon parthenogenesis in bees, it is admissible; but a discussion of the subject from a religious standpoint, would be inappropriate to our columns.—Ed.]

## SEASON OF 1888.

### Honey as Digested Nectar, and Sowing Alsike Clover.

Written for the American Bee Journal  
BY SAMUEL RAU.

The spring and early summer of 1888 opened with many auspicious omens, calculated to inspire new zeal and rekindle hope in the minds of a multitude of discouraged bee-keepers in this part of the honey-producing world, who emerged with dampened ardor from the conflicts of the preceding unpropitious season.

There was ample nectar in the early bloom to promote brood-rearing, and bees never bred up better, in my recollection. Everything looked bright and encouraging. Colonies were populous and in good condition for business at

the proper time; but alas! in spite of all the rosy promises, the harvest time came and went, and we were left with very little surplus to gladden our hearts, and what little we did manage to squeeze out, was not of the best quality.

The natural outcome of a season like the one just passed, is too much swarming and too little surplus. Bees seemed to get just honey enough to keep up brood-rearing. My berry business demanded much of my time about then, so that my bees were allowed to do too much swarming; the result was, 30 swarms and 400 pounds of surplus comb honey from 40 colonies, spring count.

A few of the swarms were a little late, and quit housekeeping before buckwheat bloom was fairly over; others I doubled up, fed 250 pounds of sugar and honey, and finally, with many misgivings, I put 59 colonies into winter quarters, many of them not overburdened with winter stores, and a few rather short for the winter campaign. Forty-two colonies having the least stores, I placed in a bee-cellar improvised for the occasion, but the temperature runs too low, and a few colonies have already gone the way of all the earth; but more about this when we "get out of the wilderness."

### Digested Nectar.

While Prof. Cook is undoubtedly correct in a scientific point of view, in defining honey as "digested nectar," yet it impresses me as being about as inelegant as it is scientific. It would be equally correct to say that mutton was digested grass, yet a good many of us would hardly fancy that way of expressing it, because, for want of taste and symmetry in the expression, it might lead to reflections that would be more productive of ill than good effects.

### Planting for Honey.

While general, or extensive, planting especially for honey may be neither profitable nor desirable, it is quite clear to my mind that we can still do something in the line of planting, that will ultimately prove profitable. Several years' experience with Alsike clover has demonstrated clearly to me, that it pays the apiarist to cultivate it. With me it is a surer source of honey than white clover, and aside from that, it makes an abundance of most excellent hay, for which purpose I prefer it to red clover.

I never saw bees work on white clover like they did on Alsike last season; the only trouble was, there was not enough of it.

I also plant raspberries for commercial purposes, as well as for the early

nectar that they furnish my bees, and I find them very profitable in this way. They help early brood-rearing wonderfully, and have never failed me in all my past experience.

The planting of basswood (linden) can be made a source of profit, as well as a world of pleasure, whether planted in waste places, fence-corners, or as timber belts. It is easy to transplant, grows rapidly, makes valuable timber, and in time yields honey abundantly, besides exerting a beneficial climatic influence.

Columbiana, O.

## WINTERING.

### The Fall, Winter and Spring Management of Bees.

Written for the American Bee Journal  
BY C. A. BUNCH.

When I take off the last surplus honey in the fall, I see that each colony has a good queen, and plenty of young bees, and if they do not have one or both, I shake the bees off the combs, close up the hive tightly, and use the combs in the spring, unless I need them to give to some colony that I find short of stores. All colonies that do not have 25 or 30 pounds of honey I will feed—honey if I have it in brood-combs, if not, I feed a syrup made of granulated sugar, as I never allow a colony to suffer for food, if I know it.

I next prepare the bees for wintering. I have five double-walled hives, three filled with chaff or cut straw, and two with dead air spaces, all with bees in them, and 20 colonies in single-walled hives, all of which I am wintering on the summer stands.

To prevent mold and damp chaff and quilts, I stop all upward ventilation with a board or plank with chaff above the board. I use plenty of chaff, and it is pressed down tightly. I like these boards the best when they are made so that the bees can pass over the frames. Such an arrangement will keep the bees from freezing; and I have found out by experience that the entrance must be left open the full width, all through the winter; if not, the bees will get too warm, and sweat so much that a small entrance will soon close up with ice—at least here in northern Indiana I find the hives to be that way. My hive entrances are open  $\frac{1}{4} \times 18\frac{1}{2}$  inches through the winter, until in April.

### Managing Bees in the Spring.

In April, when a colony is reduced by the old bees dying off, I close the entrances to about  $\frac{1}{4}$  by 4 or 6 inches, and this will cause the bees to build up

fast, and will keep the brood from chilling while we have so much changeable weather. I am not in a hurry about unpacking the bees until about time to put on the sections.

Last spring, and a year ago last spring, the most of the hives were full of bees, and swarming commenced from May 16 to the 20th. One swarm that I hived a year ago last spring, on May 16, built five Langstroth frames full of comb, with only foundation starters in the brood-nest, and stored some over 100 pounds of comb honey, besides enough to winter on. The season of 1888 was a poor one for honey in this part of the country. I think there was too much drouth.

La Paz, Ind.

## BEES STARVING.

### Season of 1888—Fruit-Growing and Bee-Keeping.

*Written for the American Bee Journal*  
BY J. M. CLARK.

The past was an "off year" with me in bee-keeping. I wintered 37 colonies, and lost 2 from starvation during the backward spring of 1888, so I commenced the season with 35 colonies in good condition. I moved them about half a mile the last of May, and lost only about a pint of bees, by their returning to their old stands.

By supplying them with extracting combs, I succeeded in increasing them to 40 colonies, by natural swarming, and secured 200 pounds of extracted honey, over and above enough to carry them through the winter.

After doubling them back to the original number (35 colonies), I put them into my new bee-cellar, in which the temperature has ranged from 35° to 46°. They have been very quiet until within a few days (March 8) 3 or 4 colonies have become quite uneasy, and spotted their hives some.

I am combining bee-keeping with small fruit-growing, and last year I got two crops from my raspberries—one crop of honey (about one-half of my honey crop), and one crop of berries—in fact about the only plants that yielded honey last summer were raspberries and buckwheat.

We hear of a good many in this locality who are losing their bees this winter by starvation. One of our leading bee-keepers killed all his bees—about 60 colonies—last fall, thinking that he could purchase in the spring cheaper than he could buy feed to carry them through the winter. I think that he will "get left."

I am not discouraged by the past failure, and propose to keep my "dish

right side up," so that when a good season comes I may then catch my share. With such a honey crop as I had in 1886, and the number and condition of my bees in 1888, my crop would have been tons, instead of hundreds of pounds.

Hillsdale, Mich.

## The Boy and the Bee.

*Written for the American Bee Journal*  
BY GEORGE W. YORK.

A little boy just ten years old  
(Who lived upon a farm),  
Went out to watch his brothers plow—  
In this there was no harm.

So quietly he walked along—  
This happy, barefoot boy,  
So free from care, or anything  
That sometimes does annoy.

A clover field was being plowed;  
The air with sweetness filled;  
And many bees did hover round  
The nests they once did build.

One bumble-bee was out of sorts,  
Indeed he was quite mad,  
And seemed delighted when he saw  
The careless, joyful lad.

"Now I'll just whisper in his ear,"  
Thought angry Mr. Bee,  
"And tell him all about my home,  
His brothers spoiled—you see?"

So thinking, Mr. Bee flew on,  
To greet the little boy;  
And when they met, the bee began  
In words devoid of joy;

But as the bee revealed his tale (or tail),  
Oh, how that lad did yell,  
"Mother! Mother!" in fearful sound,  
And rushed for home pell-mell.

Across the mellow ground they flew,  
That bee and boy—my brother;  
The bee still with his tale (and tail) engaged,  
The boy still howling "Mother!"

Which won the race I scarce can tell—  
I know the speed was high;  
The lad went like the swallows famed,  
That once did "homeward fly."  
Chicago, Ill., March 18, 1889.

## BEES IN CITIES.

### How Bee-Keeping Can be Made to Pay, etc.

*Read at the New York Convention*  
BY M. C. HAND.

For many years I have been a careful and diligent student of this most interesting branch of natural history. This industry is confined almost entirely to the country, for there is where milk and honey flow, probably for the reason that "God made the country, and man made the town." It may be interesting to know the circumstances that led me to become interested in the honey-bee, which are as follows:

When this city (Syracuse) was a mere hamlet of a few buildings, I re-

moved the stumps of the forest trees for a place to build a home, on a lot that is now fast becoming the centre of the city. I spent the best energies of my life in building up the town; by industry and economy I acquired a competency for my few and simple wants the remainder of my life, and retired to a sizable lot in a less densely populated part of the town.

I soon found that God never designed us for lives of idleness, and, to keep my health, I must still be active. So I went to work in my garden of one-sixth of an acre, with the determination to solve the problem of how much a few feet of surface could be made to produce. I was ignorant in this business of how to take the first step, and I resorted to publications on the subject, as I did later to bee-papers, and I found the conflicting of opinions in both cases were misleading. When I find old bee-keepers squarely opposed to each other, on vital points connected with their pursuit, I must believe that they have yet much to learn on the subject of bee-keeping. There is no disagreement that two and two make four, for the reason that that problem is solved.

I have now arrived at that point where I invite the most careful attention as to how I mastered the most difficult problems in both pursuits, and achieved a great success. I believe I have found the "key" that will unlock the secrets to success, in nearly all the pursuits of life. I did not find this key to success in works of horticulture, or in bee-papers, but in the Bible. It abounds in the choicest lessons for our instruction.

There is no evidence that Paul knew anything about horticulture or apiculture, yet I am indebted to him for this key to both. He says, "The invisible things of God are made known to us in the things that are made." If this be true, and I believe it is, the thing for us to do is to study "the things that are made." If you would be successful with the bees, you must study the bee itself, and find out all those invisible things essential to its life and requirements, and then furnish those to the bee. Until you do this, success will not follow you. As proof that I am correct, I will tell you what I have done.

### Studying Things that are Made.

By studying the tomato, it grows for me a vine 10 or 11 feet high, loaded to the top, some specimens being 17 inches in circumference. By studying the strawberry, a little spot half the size covered by my house, yielded me 7 bushels; some of the fruit measuring 10 inches in circumference. By studying the bees, I have learned to bring



them through the cold winters without losing a colony for years, unless they were queenless in the fall.

As further proof that I am right, I have photographs here to show, of a plot of ground 30 feet square, that paid me \$283 a year.

I found that under the shade of my fruit-trees nothing would grow, as all plants are sun-worshippers, and would not thrive without its life-giving rays; this led me to make the acquaintance of the honey-bee. I accordingly built attractive little homes under my trees, so that every inch of space should produce.

I soon discovered that the bees had laid out highways to and from their flowery fields miles away; then I found that while near them, their highways were so low, that when returning with a heavy load of honey, they would sometimes bump their heads against my hat, and in that case they would deposit their honey, and return in a minute, to chastise me for obstructing their right of way.

To obviate this difficulty, I constructed all around my bee-yard, a wire trellis 10 feet high, and covered it with grape-vines, which gave a great amount of grapes, and completely obviated the bees flying so low as to come in contact with any one in the garden; and it was a sight to stand in their little yard, and see them fall down like drops of rain when they came directly over their hives; and though my neighbors and their children were frequently within a few feet of the bee-yard, I never heard of one case of bee-stings in ten years. So quiet and unseen were they, that I believe if I had closely applied dividing colonies, I could have kept bees in the city for years, without a dozen persons knowing it.

But my mistake was in inviting all my neighbors and friends in to see my little workers. I will relate what difficulty this led me into.

#### Bees and Fruit.

One evening I was in the house of a distant neighbor, and while in conversation with him, his good wife came in and held up a partly-eaten pear in her hand, and said, "See! Mr. Hand, how your bees are eating up our pears!"

The neighbor then said: "Yes; your bees have injured my pears for several years, and this year they drop off worse than ever."

Had this been some ignoramus who had not yet found out that bees had no teeth, and could not eat pears, nor anything but what was in nearly a liquid state, I would not have been so surprised; but he was no less a personage than an editor, and must have printed or read a thousand times about

the little moth that deposits its egg in the blossom of the pear, and before the fruit is perfected, causes it to drop off. To charge this to the sting of the honey-bee is simply ridiculous.

This same editor had published in his paper, a short time previous to this occurrence, a very interesting account of the United States Government Bee-Experimental Station at Aurora, Ills. From the store of information I will only quote the following:

"Do bees injure fruit? is a question which interests every one in the country who owns fruit-trees or grape-vines. A part of the experiments has been to establish the truth in regard to the matter, and the agent declares that the little creatures are innocent of all the destructiveness popularly laid at their door."

I felt that I must convince him that my bees were innocent of this charge, or that I must remove them. I accordingly called on him, armed with the highest authority coming from the Government, and published in his own paper, thinking that it would be sufficient to convince him.

When I called at his house, and sent in my name, that I would like to see him, he rushed out to meet me like a lion from his den, in a great rage, exclaiming in the most angry manner:

"Mr. Hand, have you come here to talk bees? I have no time for that purpose;" and pointed me the way out.

This is the first time in my life that any inhabitant of this globe has ever "fired" me off from his premises. We had been acquainted for a third of a century, and he knew if I was a bee-man, I never was known to "sting" any one.

I have no ill-will against this editor; neither do I wish to make money by Tom Moore's suggestion, who says:

"The best speculation I know of for a man of pelf, is to buy such an Editor for what he is worth, and then sell him for the price he sets on himself."

Perhaps I should say as further proof, that I still entertain the kindest feeling toward this editor; that I removed my bees, which necessitated the purchasing of land two miles away, and erecting a bee-house, the whole at an outlay of more than \$1,000.

The only object I have in referring to this matter is to urge upon those engaged in this industry, the necessity of convincing the public of the impossibility of bees to injure fruit. I speak of this man as an editor, to show you that, notwithstanding his intelligence, he was, or seemed to be so much in need of knowledge, that I think it is the duty of all the bee-societies to sow broadcast over the country, and avoid, as far as possible, these unpleasant occurrences among neighbors.

Syracuse, N. Y.

## EXPERIMENTS.

### Having but Few Uncapped Sections in the Fall.

Written for the American Rural Home  
BY G. M. DOOLITTLE.

How to manage our bees so as to secure the greatest yield of comb honey, is a question of great importance to all those who are engaged in producing such honey for market, hence we often have articles on this topic giving us instructions regarding it. But comb honey is of little value unless thoroughly sealed or capped over, so that "How to manage our bees so as to have few uncapped sections in the fall," is a question of nearly as much importance to us as the first.

For years I was troubled by having from one-fourth to one-half of the combs in the sections not fully sealed at the close of the honey harvest, which were only salable at a reduced price; but of late I have a few of such, even in a poor season.

After experimenting for a year or two regarding the matter, I became convinced that the cause of the trouble was in giving the bees too many sections, and especially conducive to this was the plan of tiering up sections late in the season. How often have I, years ago, spoiled a promise of an abundant yield of comb honey by tiering up four or five days before the honey harvest closed. To tier up sections profitably requires considerable tact, and especially do we want a thorough knowledge of the honey-resources of the field which we occupy.

I think that there is too much injudicious talk in some papers regarding not allowing the bees under any circumstances to cluster on the outside of the hive, the idea being generally conveyed that when bees thus cluster out they need more room. Now, it depends when this clustering-out occurs, whether more room is needed or not; and hence I say "injudicious talk." If the clustering-out occurs at the commencement, or in the height of the honey harvest, then more room should be given, while if at the latter part of the honey harvest, or in a time of honey-dearth, no more is needed; for more room at this time results in the one case in many unfinished sections, and in the other an absolute waste of time used in enlarging the hive.

To illustrate: During some seasons we have but a very few days of honey secretion, and that often after the flowers which produce the yield are rather past their prime. At such times we often do not have on the hive one-half of the capacity which we would

use in a good season, and for this reason the bees begin to be crowded out. Hoping that the weather may be good during the rest of the time that the flowers are in bloom, we give double the room to our colonies, only to have it turn bad weather again, thus giving us only partly filled sections in the fall, while had we left them as they were, all would have been finished.

Well do I remember one such season when in time of basswood bloom we had bad weather up to the middle of the bloom. At this time I had on each hive a surplus capacity of about twenty pounds, when all at once the yield of honey became abundant, and the bees began to be crowded out. Hoping that the weather might be good for some time, I spread the sections on a few hives, by placing some empty ones between those nearly full, giving at most only about 35 pounds capacity, while when all is favorable, I use 60 pounds capacity. The result was that the bees immediately took possession of the empty sections, while the weather turned unfavorable again, and when the season was over I got no more than 5 to 10 pounds of capped honey from these colonies, while those not touched gave 20 pounds of nice capped honey. In this case the bad weather was the cause, for the spreading was not carried far enough to be unseasonable, but in former years I have been the cause of the trouble by spreading or tiering-up but a few days before the honey harvest closed.

Again, after the basswood bloom had failed, there came on a very hot spell when not a bit of honey was to be obtained, and the result was that the fronts of my hives were black with bees. According to the advice above alluded to, I should have given more room, and if the bees then persisted in clustering out, I must take my smoker and smoke each colony until they all went in and staid there. Any one can see at a glance that this would be of no use, for at such times the bees are doing just as much for the benefit of the apiarist, hanging on the outside of the hive, as anywhere.

But to return. My plan of operation to secure all capped sections is as follows: When the bees show, by building little bits of comb here and there about the hive, that they are ready for the sections, I put on sections to the amount of about 20 pounds, and leave them thus until the bees are well at work in them, when I add about 10 pounds more room, placing it at the sides of the first given them. When this room is fully occupied, I give more room at the sides to about the same amount given before, and were I using the tiering-up plan, I should have my surplus arrangement so ar-

ranged that at this time I could raise up about one-half of the sections already on, putting empty sections underneath them, instead of raising up the whole 30 pounds, thus giving them more room, a little at a time, as the bees have need.

By the time the bees fully occupy the room last given at the sides, the first 20 pounds given them is ready to come off; and when this is taken off the partly filled sections on either side are drawn together over the centre of the brood-nest, and empty sections given at the sides again to the amount which I think they will need. Thus I keep taking off and putting on sections, taking the full ones from the middle, and putting the empty sections at the sides until the season begins to draw towards its close, when as fast as full ones are taken from the center, the others are drawn up till the space is contracted to the original 20 pound capacity, or even less, if I think it is necessary. In this way the bees are given all the space they really need, while the chance for many uncapped sections in the fall is quite small.

By a little study the tiering-up plan can be made to conform to the above, and worked on the same principle. I think that any plan which requires the tiering up of from 30 to 40 pounds capacity, or the spreading out of the same number of pounds at one time, is a wrong policy to adopt, while the giving of a small amount of surplus room as needed, seems to me to be a wise course to pursue.

Borodino, N. Y.

## THE PROSPECTS.

### The Deep Snow Protecting the Clover—Basswood.

*Written for the American Bee Journal*  
BY IRA BARBER.

So far bees are in good condition in this locality, and our prospects for clover is good. There is a great depth of snow all over the fields, which has protected the grass and clover from all harm so far; and as there is from 2 to 3 feet all over our fields now, we are in hopes that it will remain until freezing weather is over.

We got no honey the past season, and where large numbers of colonies of bees were kept together, all had to be fed to keep them alive. I commenced the season with 130 colonies, and it took 3,300 pounds of granulated sugar to keep them alive since June 1, 1888, and I expect to have to feed 1,000 pounds of sugar this spring, before they can get a living. It has cost me more to keep my bees the past sea-

son, than it has in all the time since I became a bee-keeper, 37 years ago.

Our prospects for honey from basswood are not very good, on account of an ice storm that we had here in January, that did a great amount of damage to all kinds of timber, and especially to basswood. The ice loaded on the trees to such an extent as to strip every limb from any quantity of the trees, and all are more or less damaged.

If it were not for the bright prospects for clover the coming season, our hopes for a good crop of honey in this locality would be pretty slim.

De Kalb June., N. Y., Mar. 14, 1889.

## SPRING.

### Management for Pleasure as well as Profit.

*Read at the Wisconsin Convention*  
BY REV. T. H. DAHL.

How to manage our bees in spring so we can have a powerful force to gather the nectar when the honey season comes on, is a question of no little importance for a wide-awake bee-keeper. Many bee-keepers have weak colonies at the beginning of the honey-flow, but crowded hives—of bees, not of honey—when it is past. Strong colonies when the bees are consumers, and weak colonies when they are producers, is very poor philosophy. Applied to agriculture it would make every farmer in our country bankrupt.

The secret of success in apiculture is to have strong colonies in the right time, ready for the honey-flow. There can be no doubt about the correctness of this, but the question is, how shall we get them strong in the right time? Now, certainly, this must be our aim in all our management, both fall and winter, but more especially so in spring. The earlier the honey-flow is, the more difficult the management, but also the more important.

The first question will be, when to take the bees out, if they are wintered in the cellar or any other repository. Here is difference of opinions. Some believe in giving them their liberty as early as possible. Others—and I among them—consider it wise to take them out as late as possible. One of our prominent bee-keepers has said very significantly, that he is in favor of putting them out two weeks after the right time. I will give a few reasons why it is well to take them out late in the spring.

As soon as the bees get out on the summer stands they will generally commence brooding. If they get out early, they will breed early. But is not this



just our desideratum, if we would have them ready for an early flow? Certainly, if the good, warm weather could be relied upon to be steady through the whole spring, but we all know this is not the case. We are generally blessed with a good many "squaw winters." Cold nights set in and kill the brood, the bees become discouraged, and so we have "spring dwindling."

Another reason: The bees, when taken out of the cellar, will fly at every possible chance. The winds in early spring are often cold, and thousands of the poor, diligent workers will never return to their home, and the consequence is, chilled brood, weak colonies, and in many instances empty hives.

When, then, shall they be taken out? Not before they can gather pollen from maples and willows. I am every year wintering some of my colonies on their summer stands, and they will tell me when the work has begun. I now take the bees out of the cellar and put each on the same stand they occupied the previous season.

In taking them out I follow this method: I use a leather strap with hooks in each end—a la Doolittle. This strap I put over my shoulders, fasten the hooks in the hive, and off we go. I prefer to carry them out in the evening, as they will not rush out so much *en masse* the next morning after they have been out in the open air the night previous.

As soon as the weather permits, I examine them to see how much space they need, and if they have plenty of food. If any are deficient they are marked, and afterwards are supplied with combs of honey left over from last season, or are fed. A splendid rule is to have all our colonies well supplied with stores throughout the whole winter and spring. Colonies occupying too much room are confined to as many combs as they can cover. This is done by means of division-boards or dummies.

Why do I contract the hive? To accumulate the heat and thereby encourage breeding. If the colony is very strong, and the hive is an eight-frame Langstroth, I do not contract, because such a colony is able to fill that space with sufficient animal heat for brood-rearing; if let alone it generally gets everything booming for the harvest.

The other colonies I give more room as often as needed. It is my custom to put a comb in the centre of the brood-nest to force brood-rearing. If the colony needs feeding, that comb is full of honey, if not, it is empty. If more than one comb is required each week, I give the necessary comb at the outside of the brood-nest.

This judicious "spreading of the brood-nest" I have never found to be detrimental to the bees, but always beneficial. I have to depend on white clover as the only resource for surplus honey, and I must have a good force of bees ready when it commences to bloom, or the entire season is lost. Some bee-keepers practice packing in the spring. I tried it one year, but found it too expensive.

I would emphasize the following points: 1. Do not take the bees out of the cellar until late in the spring—not before there is something for them to do. 2. Let them be well supplied with stores. 3. Confine them to a space in proportion to their strength. 4. Give the queen plenty of room for breeding, and see to it that it is kept up till the hives are crowded with workers ready for the harvest.

Stoughton, Wis.

### CONVENTION DIRECTORY.

1889. Time and Place of Meeting.

Mar. 30.—Agency, at Agency, Mo.

T. S. Smith, Sec., Agency, Mo.

Apr. 23.—Des Moines County, at Burlington, Iowa.

John Nau, Sec., Middletown, Iowa.

May 1, 2.—Texas State, at Greenville, Tex.

G. A. Wilson, Sec., McKinney, Tex.

May 4.—Susquehanna County, at Montrose, Pa.

H. M. Seeley, Sec., Harford, Pa.

May 21.—Northern Illinois, at Pecatonica, Ill.

D. A. Fuller, Sec., Cherry Valley, Ill.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

### SELECTIONS FROM OUR LETTER BOX

#### Packing Bees—The Weather.

—A. Holding, Langley, B. C., on Mar. 5, 1889, writes:

I had 12 colonies of bees last season, and they averaged about 40 pounds of extracted honey per colony. I protected 14 colonies last fall on the summer stands, under a shed, with a double-walled case (with about 3 inches of space between each wall) slipped on over the hives. The cases are about 6 inches deeper than the hives, and these spaces over the frames are filled, some with clean old sacks, and some with wool. I think that they are all alive, as bees are flying from all the hives. They would have wintered well, however, this winter, so far as cold was concerned, in the unprotected hives. We are having fine, warm and clear weather with frosty nights. I should judge that the temperature in the sun to-day was not less than 80°. I observed the bees for the first time carrying pollen on March 3.

#### Results of the Past Season.—

B. F. Carter, Patterson, Iowa, on Mar. 11, 1889, writes:

I packed 35 colonies of bees last fall out-doors, with a good bed of straw under them and between the hives, leaving the fronts open. They have had several nice days to fly every month this winter, and from all appearances they are in good condition, except one colony that came out and went into another hive. There are but few dead bees as yet. My yield of honey was 400 pounds from 20 strong colonies and 8 weak ones. I increased my apiary to 45 colonies. I sold 10 colonies for \$30 last fall, and \$26 worth of comb honey in one pound sections, at 15 cents per pound. It was the poorest yield I ever had, but I am not discouraged. My bees are hybrids and pure blacks. The best yield I ever had from one colony was 140 one-pound sections of honey in one season, three years ago.

#### Wintering in Chaff-Hives.—H.

L. Sisson, Freeport, Mich., on March 11, 1889, says:

I have 7 colonies in chaff-hives on the summer stands, all wintering finely. The winter has been very mild here, and the bees have had several flights during the time. They are in far better condition than one year ago at this time.

#### Early Pollen Gathering, etc.

—Geo. E. Hilton, Fremont, Mich., on March 16, 1889, says:

The first pollen was brought in yesterday, and to-day it is coming it quite lively. The snow is nearly all gone, and it is the first time I ever saw pollen brought in in March, in this latitude. I have lost only one colony so far, out of 250, and that was queenless.

#### Honey Colic—Stormy Weather

—C. G. Ridout, Hutchinson, Minn., on March 14, 1889, writes:

On page 172 I notice the following question, which is answered by Chas. Dadant & Son: "What is the cause and cure for honey giving people who eat it, the colic?" I do not wish to contradict Messrs. Dadant & Son, for they evidently speak from experience, and intended to aid the many honey-colic sufferers; but their experience and my own, and that of several of my friends, is certainly contradicting; for I have invariably found it to be the case that, where honey was inclined to make persons sick, a small amount

was almost always sure to give them the colic, when, if they would eat a good lot of it, with bread and lots of butter, they never feel any unpleasant effects therefrom.

Last week the weather was fine, and continued so until last Wednesday, when it commenced snowing, and continued until the snow was two inches deep; this morning it commenced raining, and is still at it, and from the appearance of the sky, it may rain the remainder of the week, in which case the danger from high water will be the first of the season.

My 12 colonies of bees that are in the cellar are in good condition, from all outward indications, for I have not examined them yet, but I think that they will all come out strong and healthy. Honey keeps at a steady price, 20 cents per pound for comb, and 12½ cents for extracted, regardless of color.

**Moving Bees, etc.**—Mr. David Crumrine, Fayette, O., on March 18, 1889, writes:

I finished moving my 70 colonies of bees 20 miles on March 4, with no combs broken, and no colonies smothered. We had fine weather and good roads, and the bees are in fine condition. I cannot do without the AMERICAN BEE JOURNAL, as it contains so much instruction, and that is what every bee-keeper is in need of, that has a desire to keep up with the times.

#### **Gathering Pollen from Maples.**

—K. A. Dyke, Effingham, Ills., on March 16, 1889, says:

We are having very fine weather the whole of this week; bees have been very busy bringing in pollen from maple every day. White clover is coming up finely, and appears all right here, and very thick; but we rarely have much honey from it in this locality. Our bees have wintered without loss, on the summer stands again, and are very strong for the time of year. They have consumed quite a large amount of stores, though.

#### **Very Favorable Prospects.**

John Nebel & Son, High Hill, Mo., on March 15, 1889, write:

We are having April showers to-day, with the temperature at 70°, and bees are gathering pollen. This is surely spring weather, and it is two to three weeks earlier than usual. Our bees are in good condition for commencing this season's work, as they have wintered excellently, each colony still hav-

ing plenty of stores and plenty of bees. Now, if only white clover will continue to do its part, we may expect plenty of honey. The clover has stood the thawing and freezing weather the past winter, without any material injury; but the clover has looked as favorable many times before, and entirely failed to secrete nectar, with fields white with millions of blossoms, and we have failed to secure any surplus honey. We cannot predict for the honey crop the coming season, though the prospects are good at present. Neither can we count on honey until it is gathered.

#### **Clover in Excellent Condition.**

—Thos. B. Reynolds, Dayton, O., on March 15, 1889, says:

We have had remarkable weather the past week—70° in the shade—while a year ago this time it registered zero. The bees are flying like they do in June weather, and gathering pollen fast. There is every prospect for a fine season, the white clover being in excellent condition.

#### **Best Season in Ten Years.**

—R. M. Tate, Elihu, Ky., on Mar. 18, says:

Bees in this part of the State are in fine condition, as we have had but little cold weather this winter. The past year, in this county (Pulaski), was a good one for honey—the best in ten years. I have only 14 colonies, in Langstroth hives, and all have come through the winter safely.

#### **Bees Wintering Splendidly.**

J. L. Way, South Newbury, O., on March 11, 1889, says:

Bees have wintered splendidly so far, and have a good lot of honey on hand yet. My 25 colonies, in the Falcon chaff-hives, are all right, and as clean and sweet as they were last fall. They are packed on the sides with clover chaff, and on top with leaves.

#### **Bees and White Clover all**

**Right.**—Thomas S. Wallace, Clayton, Ills., on March 16, 1889, writes:

On Nov. 27, 1888, I put 100 colonies of Italian bees into the cellar, which has stone walls, and the floor cemented, which keeps dry and dusty. The bees are all in movable-comb hives. I put them out on March 5, and 99 were alive, one having starved to death; 3 other weak colonies had lost their queens, and the rest were in the best condition that I have ever seen bees at

this time of the year. I have examined them, cleaned the hives out, and found the queens all laying; most of the hives had sealed brood and bees hatching out. Our prospects for honey this year are good. I have 9 acres of Alsike clover, that was sowed last spring, and it looks well. The white clover is all right now; it came from the seed last year. The past two seasons killed out almost all of the old white clover, and if we can have reasonable weather this year, we will have a large crop of honey.

#### **White Clover and the Bees.**

Geo. L. Transue, Easton, Pa., on Mar. 15, 1889, says:

I examined my bees on March 13, and found them in splendid condition, very strong and considerable brood; in fact I do not think that they could be any better. Prospects for white clover are first-class in this section of the country.

#### **Bees in Good Condition.**

—A. W. Fisher, Ganges, Mich., on March 16, 1889, says:

I commenced the season of 1888 with 43 colonies, increased them to 54, and took 3,400 pounds of comb honey in one-pound sections, and 120 pounds of extracted honey. I am wintering my bees on the summer stands, packed in chaff; all seem to be in good condition now. I have wintered my bees on the summer stands for the past 15 years, and I have never met with a serious loss.

#### **A Flower.**

—R. H. Campbell, Madison, Ga., on Feb. 27, 1889, writes as follows:

I send you a species of flower that at this date is covering the earth almost everywhere, and though nearly every day is cool, the Italians are fairly roaring on it. I never saw it before here, and frost has no effect upon it. It has rained nearly all winter, and the earth is full of water. Vegetation ought to be very rank this spring. We had no winter until January and February, but those months have been genuine winter. My bees wintered well, and have an abundance of honey.

#### **Uncapping Honey.**

—H. E. Hill, Titusville, Pa., on March, 16, writes:

In reply to Mr. Henry Durham's question on page 172, I would say, having a pail of cold water handy, and occasionally dipping the uncapping knife into it, will be found to obviate



the difficulty referred to, and greatly assist in making a clear, smooth cut, if the knife is very sharp, as it should be for uncapping. A good uncapping-knife is indispensable in the apiary. I believe there is but one good knife, made for that purpose; I have used a number of different kinds, but I find it "false economy" to butcher combs with a cheap knife. The Bingham & Hetherington uncapping-knife is worth just its price more than any other I have ever used.

### Bee-Keeping as a Business.—

James A. Scott, Harrison, O., on Mar. 13, 1889, writes:

In this locality there are many bee-keepers owning from 3 to 20 colonies. Many have had the "bee-fever," but did not avail themselves of the many excellent bee books and papers, and consequently failed for want of knowledge. The general opinion here is, that keeping bees as a business is unprofitable. We have had three poor years in succession. Foul brood prevails extensively—several apiaries of from 12 to 20 colonies being entirely dead. I must admit that no one has followed bee-keeping intelligently and persistently, long enough to know how profitable it may be. I greatly prize the back volumes of the AMERICAN BEE JOURNAL, as books of reference.

**Costly Neglect.**—It is a very great mistake for a farmer to pay big prices for machinery to till his soil, and then leave them out to take the weather. Yet, strange to say, a man can hardly travel fifty miles through our settlements without counting a dozen or more ploughs, hay-racks, reaping machines, etc., standing in the field where the farmer unhitched from them when the season's work was done. Some even have tool-houses, but have neglected to store their implements. This is a burning shame, for next year the farmer will be patching up and trying to work with old, weather beaten, sun-warped, rusty implements, and one year hence he will be in the market buying new ones. Thus he will be at a great loss of time this year in making his much-abused implements answer, and at the great expense next year of buying new machinery, which if served in a like manner will soon wear out also. Now, the first object of every farmer should be to house his tools when through work with them, as they will last double as long by this treatment. Nothing is truer than the statement that sun, wind, rain and snow wear machinery more than judicious use.



ALFRED H. NEWMAN,  
BUSINESS MANAGER.

## Business Notices.

**Your Full Address**, plainly written, is very essential in order to avoid mistakes.

**If You Live** near one post-office and get your mail at another, be sure to give the address that we have on our list.

**Give a Copy** of "Honey as Food and Medicine" to every one who buys a package of honey. It will sell lots of it.

**Dr. Miller's Book**, "A Year Among the Bees," and the AMERICAN BEE JOURNAL for one year—we send both for \$1.50.

**If you Lose Money** by carelessly enclosing it in a letter, it is without excuse, when a Money Order, which is perfectly safe, costs but 5 cents.

**New Subscribers** can obtain the full numbers for 1888 and 1889 for \$1.80, if application be made at once, before all the sets of 1888 are gone.

**Paper Boxes**—to hold a section of honey for retail dealers. We have two sizes on hand to carry sections  $4\frac{1}{4} \times 4\frac{1}{4}$  and  $5\frac{1}{4} \times 5\frac{1}{4}$ . Price, \$1.00 per 100, or \$8.50 per 1,000.

**Preserve Your Papers** for future reference. If you have no **BINDER** we will mail you one for 60 cents; or you can have one **FREE**, if you will send us 3 new yearly subscriptions for the BEE JOURNAL.

**Please write American Bee Journal** on the envelope when writing to this office. Several of our letters have already gone to another firm (a commission house), causing vexatious delay and trouble.

**Honey.**—We have for sale a quantity of Extracted Honey in kegs holding about 230 pounds each, which we are selling, free on board the cars, at 8 cents per pound for Amber and 9 cents per pound for White.

**In order to pay you** for getting new subscribers to send with your renewal, we make you this offer. For each yearly subscriber, with \$1.00, you may order 25 cents worth of any books or supplies that we have for sale—as a **premium**.

**A Home Market** for honey can be made by judiciously distributing the pamphlets, "Honey as Food and Medicine." Such will create a demand in any locality at remunerative prices. See list on the second page of this paper.

## CLUBBING LIST.

**We Club** the American Bee Journal for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

Price of both. Club	
The American Bee Journal	1 00
and Gleanings in Bee-Culture	2 00 1 75
Bee-Keepers' Guide	1 50 1 40
Bee-Keepers' Review	1 50 1 40
The Apiculturist	1 75 1 65
Bee-Keepers' Advance	1 50 1 40
Canadian Bee Journal	2 00 1 80
Canadian Honey Producer	1 40 1 30
The 8 above-named papers	5 65 5 00
and Langstroth Revised (Dadant)	3 00 2 75
Cook's Manual (old edition)	2 25 2 00
Bees and Honey (Newman)	2 00 1 75
Binder for Am. Bee Journal	1 60 1 50
Dzierzon's Bee-Book (cloth)	3 00 2 00
Root's A B C of Bee-Culture	2 25 2 10
Farmer's Account Book	4 00 2 20
Western World Guide	1 50 1 30
Heddon's book, "Success"	1 50 1 40
A Year Among the Bees	1 75 1 50
Convention Hand-Book	1 50 1 30
Weekly Inter-Ocean	2 00 1 75
How to Propagate Fruit	1 50 1 25
History of National Society	1 50 1 25

**Do not send to us** for sample copies of any other papers. Send for such to the publishers of the papers you want.

### Hastings' Perfection Feeder.—

This excellent Feeder will hold 2 quarts, and the letting down of the feed is regulated by a thumb-screw. The cap screws securely on. It is easy to regulate—either a spoonful or a quart—and that amount can be given in an hour or a day, as desired. By it the food can be given where it is most needed—just over the cluster. Not a drop need be lost, and no robber bees can get at it. A single one can be had for 40 cents, or a dozen for \$3.50, and it can be obtained at this office. Postage 10 cents extra.

### International Bee-Convention.

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